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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
09/749,743	12/28/2000	Masataka Goto	32307-168819	5546	
26694	7590 06/16/2004		EXAM	INER	
	VENABLE, BAETJER, HOWARD AND CIVILETTI, LLP P.O. BOX 34385			LAO, TIM P	
	TON, DC 20043-9998		ART UNIT	PAPER NUMBER	
			2655	j	
			DATE MAILED: 06/16/2004	, 11	

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	plicant(s)	
	09/749,743	GOTO ET AL.	
Office Action Summary	Examiner	Art Unit	
	Tim Lao	2655	
The MAILING DATE of this communication apperiod for Reply	pears on the cover she	et with the correspondence address	
A SHORTENED STATUTORY PERIOD FOR REPL THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a repl - If NO period for reply is specified above, the maximum statutory period - Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailin earned patent term adjustment. See 37 CFR 1.704(b).	36(a). In no event, however, my within the statutory minimum will apply and will expire SIX (6 a, cause the application to beco	nay a reply be timely filed of thirty (30) days will be considered timely.) MONTHS from the mailing date of this communication. me ABANDONED (35 U.S.C. § 133).	
Status			
1)⊠ Responsive to communication(s) filed on 23 №	larch 2004.		
2a)⊠ This action is FINAL . 2b)☐ This	action is non-final.		
3) Since this application is in condition for allowa		•	
closed in accordance with the practice under I	Ex parte Quayle, 1935	C.D. 11, 453 O.G. 213.	
Disposition of Claims			
4)⊠ Claim(s) <u>1,3,4,6,7,9,10 and 12-26</u> is/are pendi	ng in the application.		
4a) Of the above claim(s) is/are withdra			
5) Claim(s) is/are allowed.			
6)⊠ Claim(s) <u>1,3,4,6,7,9,10,12-20 and 24-26</u> is/are	rejected.		
7)⊠ Claim(s) <u>21-23</u> is/are objected to.			
8) Claim(s) are subject to restriction and/o	r election requiremen	i.	
Application Papers			
9)☐ The specification is objected to by the Examine	er.		
10)☐ The drawing(s) filed on is/are: a)☐ acc	epted or b)□ objecte	d to by the Examiner.	
Applicant may not request that any objection to the	drawing(s) be held in ab	eyance. See 37 CFR 1.85(a).	
Replacement drawing sheet(s) including the correc			
11) The oath or declaration is objected to by the Ex	kaminer. Note the atta	ched Office Action or form PTO-152.	
Priority under 35 U.S.C. § 119			
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of:	priority under 35 U.S	.C. § 119(a)-(d) or (f).	
1.☐ Certified copies of the priority document	s have been received		
2. Certified copies of the priority document			
	3. Copies of the certified copies of the priority documents have been received in this National Stage		
application from the International Bureau (PCT Rule 17.2(a)).			
* See the attached detailed Office action for a list	of the certified copies	not received.	
Attachment(s)			
1) Notice of References Cited (PTO-892)	4) 🗍 Interv	riew Summary (PTO-413)	
2) DNotice of Draftsperson's Patent Drawing Review (PTO-948)	Pape	r No(s)/Mail Date	
Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date	5)	e of Informal Patent Application (PTO-152)	
U.S. Patent and Trademark Office			
PTOL-326 (Rev. 1-04) Office A	ction Summary	Part of Paper No./Mail Date 11	

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DETAILED ACTION

Response to Arguments

- 1. Applicant's arguments with respect to claims 1, 3-4, 6-7, 9-10, 12-26 have been considered but are most in view of the new ground(s) of rejection.
- 2. Applicants submitted that Okuno* does not teach complementing a language part to the fragment of when a filled pause is detected. A filled pause as described by the Applicants is a word with prolonged and vocalized sound. Words such as "uh...", "um..." etc. include filled pause (Applicants: p.5, II.1-6). Okuno teach such words for triggering speech complement. As an example, a user speaks the phrase "Tokyo/honyalala/Hotel" meaning "Tokyo/something/Hotel". The wild card expression "honyalala" includes a filled pause, that is, it is a word with prolonged and vocalized sound (Okuno: p.16, ¶ 0045, II.5-9) and the word length is adjustable by the number 'la' (Okuno: p.15, ¶ 0043; see also Fig.3 & 7). This word is for triggering speech complement, i.e., the word is to be replaced or substituted by a known word such as "Stayin" from the vocabulary storage part 102 to complete the phrase "Tokyo Stayin Hotel" (Okuno: p.15, ¶ 0044; p.18, ¶ 0052). The speech recognition system of Okuno targets the speech recognition of continuous words (Okuno: p.14, ¶ 0039, last 4 lines) and The words "Tokyo" and "Hotel" are fragments (e.g., parts of a sentence: p.8, ¶ 0015-0017) of a spoken language which is no different than the fragments of the spoken language described by the Applicants (Applicants: p.7, II.17-27; p.8, II.1-22).

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*Note: Takehide Yano was translated by the automatic translation system of Japan Patent Office as the name of one of the inventors in reference JP 11-095793 which was used in the original office action. However, the official translation is Takehide Okuno.

Claim Rejections - 35 USC § 112

- 3. The following is a quotation of the first paragraph of 35 U.S.C. 112:
 - The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
- 4. Claim 25 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As best understood from the specification of the instant application, speech forward complementing is performed after detecting the presence of a filled pause (p.6, II.20-27; p.7, II.1-16). Therefore, the feature "executing speech forward complementing when said filled pause is not present", as claimed in part (g) of this claim, is not supported in the original disclosure. If the Applicant is content that such limitation is disclosed in the original disclosure, the examiner requests that the Applicant provides specific references in the disclosure to support the added limitation "executing speech forward complementing when said filled pause is not present".

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5. Claim 25 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Part (g) of claim 25 recites the limitation "executing speech forward complementing when said filled pause is not present". As best understood from the specification of the instant application, speech forward complementing is performed after detecting the presence of a filled pause (p.6, II.20-27; p.7, II.1-16). Therefore, it is not clear how speech forward complementing is executed when a filled pause is not present.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Cla	7. Claims 1, 3-4, 6-7, 9-10, 12-18, 20, 24-26 are rejected under 35 U.S.C. 102(b) as being		
anticipated	anticipated by Okuno et al. (Official English translation of Japan patent publication 11-095793, hereinafter		
"Okuno").	"Okuno").		
Claim(s)	Okuno discloses:		
1			
	A speech complementing apparatus comprising:		
	moons for reportedly and posting up detecting up at the same in a filled name		
	means for repeatedly and continuously detecting whether or not there is a filled pause		

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(e.g., presence/absence of wild card expression "honyalala": p.18, ¶ 0050) in a user's speech. wherein said filled pause (e.g., "honyalala") is a trigger for complementing (e.g., replacing or substituting known word or words into the wild card expression: p.15, ¶ 0044); {1. The wild card expression "honyalala", meaning "something", includes a filled pause, i.e., it is word with prolonged and vocalized sound ("lala") (p.16, ¶ 0045, II.5-9) and it's length is adjustable by the number of 'la' (p.15, ¶ 0043; Fig.3 & 7). 2. Repeatedly detecting whether or not there is a filled pause is performed in the case where multiple wild card expressions appearing in a spoken phrase. (p.41, ¶ 0151)} means for recognizing said user's speech (e.g., "Tokyo honyalala Hotel" meaning "Tokyo something Hotel") in parallel with said detecting whether or not there is said filled pause (e.g., presence/absence of wild card expression); (p.16, ¶ 0044; p.18, ¶ 0051) means for complementing a language part (e.g., replacing the wild card expression "honyalala" with the word "Stayin": p.18, ¶ 0052) to the fragment of the language (e.g., "Tokyo", "Hotel" of "Tokyo honyalala Hotel") spoken by the user when said filled pause is detected (e.g., presence of wild card expression) by said means for detecting; (p.22, ¶ 0069) and {3. The words "Tokyo", "Hotel" are fragments of the language, e.g., parts of a sentence, spoken by the user. (p.8, ¶ 0015-0017)} means for outputting a result of recognizing by said means for recognizing when no filled pause was detected. (p.18, ¶ 0050, II.4-5; see also p.49, Fig.14: S201, S202, S203) Claim(s) (canceled). Claim(s) Okuno discloses: The speech complementing apparatus as claimed in claim 1, wherein said means for complementing complements said language part after said filled pause with a clue (e.g., "Tokyo", p.15, ¶ 0043), which is a fragment before said filled pause (e.g., "honyalala") of the speech (e.g., "Tokyo honyalala Hotel"), when said filled pause was detected. Claim(s) Okuno discloses: 4

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	The speech complementing apparatus as claimed in claim 1, wherein in said means for complementing considers a specified key-word (e.g., "Stayin") as a specified string to
	replace a specific key-word (e.g., "honyalala") based on a relation (e.g., metrical information
	such as the rhythm of the input speech) of words around the specific key-word, when
	responding to said specific key-word including said filled pause. (p.22, ¶ 0069; p.23, ¶ 0071)
	responding to said specific key werd including said filled passe. (p.22, ii sees, p.26, ii see r)
Claim(s)	(canceled).
5	
Claim(s)	Okuno discloses:
6	
	The speech complementing apparatus as claimed in claim 4, further comprising:
	output means for outputting a list of candidates for complementing when there are a
	plurality of candidates for complementing; (p.22, ¶ 0069, II.8-11) and
	input receiving means for receiving a selection from the user of said plurality of
	candidates, (p.33, ¶ 0107, II.6-9)
	wherein when there is only one candidate, the apparatus performs one of: asking the user's confirmation with said output means, or inputting automatically the one candidate (p.22, ¶ 0069, II.1-8).
Claim(s)	Okuno discloses:
7	
	A speech complementing method wherein a system recognizes a user's speech, said
	method comprising:
	(a) detecting repeatedly and continuously whether or not there is a filled pause (e.g.,
	presence/absence of wild card expression "honyalala": p.18, ¶ 0050) in the user's speech,
	wherein said filled pause is a trigger for complementing (e.g., replacing or substituting known
	word or words into the wild card expression: p.15, ¶ 0044);
	{1. The wild card expression "honyalala", meaning "something", includes a filled pause, i.e., it
	is word with prolonged and vocalized sound ("lala") (p.16, ¶ 0045, II.5-9) and it's length is
	adjustable by the number of 'la' (p.15, ¶ 0043; Fig.3 & 7).
	2. Detecting repeatedly whether or not there is a filled pause is performed in the case where

11	
Claim(s)	(canceled).
J	around the specific key-word. (p.22, ¶ 0069; p.23, ¶ 0071)
	based on a relation (e.g., metrical information such as the rhythm of the input speech) of
	"Stayin") is considered as a specified string to replace the specific key-word (e.g., "honyalala")
	specific key-word (e.g., "honyalala") including said filled pause, the specified key-word (e.g.,
	The speech complementing method as claimed in claim 7, wherein responding to a
10	<u> </u>
Claim(s)	Okuno discloses:
	before said filled pause (e.g., "honyalala").
	0043) which is a fragment of the user's speech (e.g., "Tokyo honyalala Hotel") occurring
	complementing the language part following said filled pause with a clue (e.g., "Tokyo", p.15, ¶
9	The speech complementing method as claimed in claim 7, wherein (c) comprises
Claim(s)	Okuno discloses:
8	
Claim(s)	(canceled).
	3000, ii. 1 0, 000 aido p.70, 1 ig. 17. 0201, 0202, 0200)
	(d) outputting a result of said recognizing when no filled pause is detected. (p.18, ¶ 0050, II.4-5; see also p.49, Fig.14: S201, S202, S203)
	spoken by the user. (p.8, ¶ 0015-0017)}
	is detected (e.g., presence of wild card expression); (p.22, ¶ 0069) and {3. The words "Tokyo", "Hotel" are fragments of the language, e.g., parts of a sentence,
	"Hotel" of "Tokyo honyalala Hotel") spoken by the user by said system when said filled pause is detected (e.g., presence of wild card expression); (p. 22, ¶.0060), and
	"honyalala" with the word "Stayin": p.18, ¶ 0052) to a fragment of the language (e.g., "Tokyo",
	(c) complementing a language part (e.g., replacing the wild card expression
	something Hotel") in parallel with (a); (p.16, ¶ 0044; p.18, ¶ 0051)
	(b) recognizing said user's speech (e.g., "Tokyo honyalala Hotel" meaning "Tokyo
	multiple wild card expressions appearing in a spoken phrase. (p.41, ¶ 0151)}

12	
12	The appeals complementing method as element is along 7 wherein (a) further
	The speech complementing method as claimed in claim 7, wherein (c) further
	comprises:
	outputting a list of the candidates for complementing to a screen (e.g., a computer
	screen: p.40, ¶ 0148) or in audio form, when there are a plurality of candidates for
	complementing; (p.22, ¶ 0069, II.8-11)
	receiving a selection of said plurality of candidates from said user; (p.33, ¶ 0107, II.6-
	9) and
	when there is only one candidate, performing one of: asking confirmation of said only
	one candidate from said user, or inputting said only one candidate automatically (p.22, ¶
	0069, II.1-8).
Claim(s)	Okuno discloses:
13	
	A recording medium (e.g., CD-ROM: p.40, ¶ 0148) which stores a program executed
	in a complementing apparatus, said program comprising:
	a speech input step (p.44, Fig.1: 100) for inputting a speech (e.g., "Tokyo honyalala
	Hotel" meaning "Tokyo something Hotel": p.15, ¶ 0044, II.1-2);
	a first detecting step for detecting repeatedly and continuously whether or not there is
	a filled pause (e.g., presence/absence of wild-card expression "honyalala": p.18, ¶ 0050) in
	the inputted speech;
	{1. The wild card expression "honyalala", meaning "something", includes a filled pause, i.e., it
	is word with prolonged and vocalized sound ("lala") (p.16, ¶ 0045, II.5-9) and it's length is
	adjustable by the number of 'la' (p.15, ¶ 0043; Fig.3 & 7).
	2. Repeatedly detecting whether or not there is a filled pause is performed in the case where
	multiple wild card expressions appearing in a spoken phrase. (p.41, ¶ 0151)}
	maniple wild card expressions appearing in a spoken piliase. (p.41, \(\pi\)0151//
	a recognizing step for recognizing said user's speech (e.g., "Tokyo honyalala Hotel"
	meaning "Tokyo something Hotel") in parallel with said first detecting step, wherein a
	recognition result is generated (e.g., "Tokyo honyalala Hotel": p.18, ¶ 0051); (p.16, ¶ 0044)
	1-1-3

Claim(s)	Okuno discloses:
	(e.g., "Stayin") in the result of recognizing in said recognizing step. (p.18, ¶ 0052)
	The recording medium as claimed in claim 13, wherein in said second detecting step, said word fragment (e.g., "Tokyo", "Hotel") is specified by detecting a predetermined string
Claim(s) 16	Okuno discloses:
Claim (a)	Olymp diaglaces
	{1. "Tokyo" is part of the recognition result "Tokyo honyalala Hotel".}
	The recording medium as claimed in claim 14, wherein said word fragment (e.g., "Tokyo") is said recognition result before said period of the filled pause (e.g., "honyalala").
15	•
Claim(s)	Okuno discloses:
	a period of the filled pause (e.g., "honyalala") in the speech inputted in said speech input step. (p.18, ¶ 0050; p.15, ¶ 0044; p.16, ¶ 0044)
	The recording medium as claimed in claim 13, wherein in said second detecting step, the word fragment (e.g., "Tokyo", "Hotel" of "Tokyo honyalala Hotel") is specified by detecting
14	
Claim(s)	Okuno discloses:
	an outputting step for outputting said recognition result when no filled pause was detected. (p.18, ¶ 0050, II.4-5; see also p.49, Fig.14: S201, S202, S203)
	a complementing step for complementing said recognition result, based on the detected word fragment; (p.22, ¶ 0069)
	spoken by the user. (p.8, ¶ 0015-0017)}
	0052) {3. The words "Tokyo", "Hotel" are fragments of the language, e.g., parts of a sentence,
	"Tokyo honyalala Hotel") when there is the filled pause in said first detecting step; (p.18, ¶
	"Tokyo honyalala Hotel") being a base to be complemented in said recognition result (e.g.,

17	
	The recording medium as claimed in claim 16, wherein said word fragment (e.g.,
	"Tokyo", "Hotel") is the result of recognizing after said predetermined string (e.g., "Stayin").
	(p.18, ¶ 0052)
Claim(s)	Okuno discloses:
18	Skane diesioses:
	The recording medium as claimed in claim 13, further comprising:
	a selecting step for selecting a candidate for complementing if there are the plurality
	of candidates when said word fragment is complemented by said complementing step. (p.22,
	¶ 0069, II.8-11; p.33, ¶ 0107, II.6-9)
Claim(s)	Okuno discloses:
20	
	The speech complementing method as claimed in claim 7, further comprising:
	recognizing (e.g., recognizing "honyalala") from a middle of a spoken word (e.g.,
	"Tokyo honyalala Hotel" meaning "Tokyo something Hotel"); (p.16, ¶ 0044; p.18, ¶ 0051) and
	speech-backward complementing (e.g., "Honyalalalalalalalala/Hotel" -> "Stayin
	Hotel") based on the result of said recognizing. (p.45, Fig.3; p.26, ¶ 0082)
	{1. The input speech "Honyalalalalalalalalalalalals" triggers speech-backward complementing
	(Fig.3). "Stayin Hotel" is a registered word combination in the vocabulary storage part 202
	that is checked and determined in the speech-backward complementing of
	"Honyalalalalalalalala/Hotel" (p. 26, ¶ 0082).}
Claim(s)	Okuno discloses:
24	The speech complementing method as claimed in claim 7, further comprising:
	presenting a plurality of candidates for complementing to a user; (p.22, ¶ 0069, II.8-
	11)
	accepting a selection of a user to complement by the selected candidate for

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	complementing; (p.33, ¶ 0107, II.6-9) and
	automatically complementing with a candidate when a number of candidates for complementing is one. (p.22, ¶ 0069, II.1-8).
Claim(s) 25	Okuno discloses:
	The speech complementing method as claimed in claim 7, further comprising:
	(e) determining whether or not a wild card key-word is included in the result of
	recognizing just before said filled pause when responding to detecting by (a); (p.18, ¶ 0050)
	(f) executing speech backward complementing (e.g., "Honyalalalalalalalalalalalalalalalalalalal
	(g) executing speech forwarding complementing (e.g., "Tokyo hoyalalalalalala" ->
	"Tokyo Stayin") when said filled pause is not present. (p.45, Fig.3; p.26, ¶ 0082)
Claim(s)	Okuno discloses:
20	The speech complementing method as claimed in claim 12, further comprising:
	selecting a remaining part (e.g. "Hotel"), wherein the system complemented the part
	of a fragment of a language (e.g., "Tokyo") spoken by the user, after the system displays the list of the candidates for complementing and when the user selects the plurality of candidates
	for complementing, by recognizing a speech spoken to read by the user. (p.22, ¶ 0069)

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okuno in view of Bahl et al. (U.S. Patent 5,884,259, hereinafter "Bahl").

Claim(s)

Okuno shows:

19

The speech complementing method as claimed in claim 7, further comprising:

generating a candidate of speech forward complementing. (p.22, ¶ 0069)

Okuno does not show:

generating a candidate by tracing toward leaves of a word dictionary of a tree structure, considering an effective hypothesis as a seed.

Bahl teaches:

generating a candidate by tracing toward leaves of a word dictionary of a tree structure. (col.1, II.25-43; col.12, II.41-43)

It would be obvious to a person of ordinary skill in the art at the time the invention was made to modify the speech complementing method of Okuno to include the tree structure for representing the candidates because tree structure is an efficient representation of the vocabulary in terms of it's phonemes. It would be obvious to use a hypothesis as a seed so that speech complement can be performed for nodes along a tree in the case where multiple candidates corresponding to multiple wild card expressions are generated.

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10. Claims 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter:

Claim(s) The prior art fails to show: 21 The speech complementing method as claimed in claim 20, wherein said system comprises a word dictionary of a tree structure and an entry node table, and wherein the method further comprises: registering a root from which said recognizing starts in said entry node table; adding syllables of words in said word dictionary temporarily to said entry node table; obtaining highest hypotheses from the hypotheses which reach to leaves of said tree structure and are numbered in order of high likelihood so that the highest hypotheses obtained become candidates of complementing for said speech backward complementing. Claim(s) The prior art fails to show: 22 The speech complementing method as claimed in claim 20, wherein said system comprises a word dictionary of a tree structure and a entry node table, and wherein the method further comprises: registering a root from which said recognizing starts in said entry node table; selecting candidates for complementing when a top of a word is uttered by the user by registering words temporarily on said word dictionary, wherein said words to be registered are ones in which the end of an unuttered phoneme string of each candidate is a leaf. Claim(s) The prior art fails to show: 23 The speech complementing method as claimed in claim 19, wherein said system comprises a word dictionary of a tree structure and a entry node table, and wherein the

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method further comprises:

registering a root from which said recognizing starts in said entry node table;

adding a seed of a candidate for complementing temporarily to said entry node table, wherein said seed is used when said candidate for complementing is generated, as a root, selection of the plurality of candidates for complementing by uttering a latter part of a word is made possible.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

- 13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- U.S. Patent Documents:

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[1] 6,484,141

11/2002

Tomoeda

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Lao whose telephone number is 703-305-8955.

The examiner can normally be reached on M-F, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tim Lao Examiner Art Unit 2655

TL 06/07/04

SUSAN MOFADDEN PRIMARY EXAMINER

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